What is claimed is:

1. A system for purifying exhaust gas generated by an internal combustion engine having an air intake system and an exhaust system which includes an exhaust pipe extending from an exhaust manifold of the engine and a catalyst installed in the exhaust pipe, the exhaust system exhausting gas generated by the engine to the atmosphere, including:

a bypass branching out from the exhaust pipe at a location downstream of the catalyst and merging to the exhaust pipe downstream of the branching point;

an adsorber installed in the bypass;

a valve means which closes the bypass;

a conduit connected to the bypass at one end and connected to the air intake system for recirculating the exhaust gas to the air intake system;

valve control means which opens the valve means for a period since starting of the engine to introduce the exhaust gas to the bypass such that the adsorber installed in the bypass adsorbs the unburnt component in the exhaust gas; and

an EGR control means which causes the exhaust gas introduced in the bypass to be recirculated to the air intake system through the conduit;

wherein the improvement comprises:

the valve means is provided adjacent the branching point in the exhaust pipe; and

a chamber is provided surrounding the branching point such that the conduit is connected to the bypass at one end in the chamber.

2. A system according to claim 1, wherein the chamber encloses a part of the exhaust pipe such that the part of the exhaust pipe is close to the adsorber.

3. A system according to claim 1, wherein the chamber encloses a part of the exhaust pipe at the branching point and the valve means.

4. A system according to claim 2, wherein the chamber encloses a part of the exhaust pipe at the branching point and the valve means.

5. A system according to claim 1, further including a combination valve comprised of the valve means which closes the bypass and a second valve means which closes the exhaust pipe, the valve means and the second valve means being connected to a shaft such that when the valve means closes the bypass, the second valve opens the exhaust pipe.

6. A system according to claim 2, further including a combination valve comprised of the valve means which closes the bypass and a second valve means which closes the exhaust pipe, the valve means and the second valve means being connected to a shaft such that when the valve means closes the bypass, the second valve opens the exhaust pipe.

7. A system according to claim 1, wherein the valve control means including;

catalyst temperature parameter detecting means for detecting a parameter relating to a temperature of the catalyst;

and determines a period based on the detected parameter.

8. A system according to claim 7, wherein the valve control means decreases the period with increasing temperature of the catalyst.

9. A system according to claim 7, wherein the valve control means decreases the period when the engine is under high load.

10. A system according to claim 7, wherein the valve control means decreases the period when the engine is in a failsafe condition.

11. A system according to claim 7, wherein the parameter is a coolant temperature of the engine.

12. A system according to claim 11, wherein the valve control means decreases the period with increasing temperature of the catalyst.

13. A system according to claim 11, wherein the valve control means decreases the period when the engine is under high load.

14. A system according to claim 11, wherein the valve control means decreases the period when the engine is in a failsafe condition.

15. A system according to claim 1, wherein the valve control means including;

exhaust gas volume parameter detecting means for detecting a parameter relating to a volume of the exhaust gas;

and determines a period based on the detected parameter.

16. A system according to claim 15, wherein the valve control means decreases the period when the engine is under high load.

17. A system according to claim 15, wherein the valve control means decreases the period when the engine is in a failsafe condition.

18. A system according to claim 15, wherein the parameter is a quantity of fuel injection to be supplied to the engine.

19. A system according to claim 18, wherein the valve control means decreases the period when the engine is under high load.

20. A system according to claim 18, wherein the valve control means decreases the period when the engine is in a failsafe condition.

21. A system according to claim 1, further including:

catalyst activation promoting means for promoting activation of the catalyst when the engine is started.

22. A system according to claim 21, wherein the catalyst activation promoting means comprising an ignition timing control means which retards an ignition timing supplied to the engine.

23. A system according to claim 22, wherein the ignition timing means discontinues to retard the ignition timing under a specific engine operating condition.

24. A system according to claim 1, wherein the EGR control means including;

fuel injection quantity determining means for determining a quantity of fuel injection to be supplied to the engine;

air/fuel ratio detecting means for detecting an air/fuel ratio of the exhaust gas;

a feedback loop means having a controller which calculates a feedback correction coefficient using a control law expressed in a recursion formula such that the detected air/fuel ratio converges to a desired air/fuel ratio;

EGR correction coefficient calculating means for calculating an EGR correction coefficient when recirculating the exhaust gas to the air intake system;

fuel injection quantity correcting means for correcting the quantity of fuel injection based on at least the feedback correction coefficient and the EGR correction coefficient.

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